

File
BALD EAGLE
file

Re. to BJA 9/1/77
(Phoenix) 9/20/77

Impact of the Proposed Operating Criteria for the Lower Carson-Lower Truckee Rivers on the Bald Eagle - Supplement section for DES 77-18

The US Fish and Wildlife Service has proposed in the Federal Register Vol. 41, No. 134, July 12, 1976, that the Bald Eagle Haliaeetus leucocephalus be listed as an endangered species in most of the conterminous 48 states including Nevada. In addition, there would no longer be a southern subspecies under this proposed rulemaking.

Bald Eagles winter in the Lower Carson River Basin area between mid-November and mid-March annually. Peak numbers occur in December and January. See attachment 1. Aerial surveys of the Bald Eagles during the annual mid-winter waterfowl inventory since 1974 have recorded between 10 and 18 Bald Eagles in the Lower Carson River Basin. Due to limited flight coverage and difficulty in seeing individual birds, it is estimated that the total population may be as high as 20 to 30 birds.

Bald Eagles prefer fish when readily available, however, crippled waterfowl are such an important supplement to the fall and winter food supply that numbers commonly fluctuate with the numbers of waterfowl present.* Bald Eagles in the Lower Carson River Basin commonly are seen near waterfowl concentrations in the Stillwater Marsh and Carson Lake areas. Other concentration points are the Lahontan Reservoir and Indian Lakes (Stillwater W. M. Area) areas where dead trees are available for perching as well as fish and waterfowl for food. Other secondary areas where Bald Eagles have been sighted include: S-Line Reservoir, Harmon Reservoir, Soda Lakes, Massie Slough and Carson River. Records between 1972 and 1976 show that 76% of the Bald Eagle use below Lahontan Dam occurs on the Stillwater W. M. Area and Carson Lake (see Table 1).

The impact of the Proposed Operating Criteria for the Lower Carson-Lower Truckee Rivers on the Bald Eagle wintering population in the Lower Carson River Basin is difficult to assess. During the peak Bald Eagle wintering period (December-January) waterfowl numbers are generally at a low ebb except for a fairly stable winter population of Canada geese. Most water areas are intermittently frozen during this period and waterfowl numbers fluctuate with the amount of open water available. Due to this low normal winter waterfowl population, even a below normal water acreage may support these reduced waterfowl numbers, when sufficient water acreage is open. Thus, while Bald Eagle numbers vary with the waterfowl population fluctuations, several factors are involved and lower water receipts may or may not directly affect Bald Eagle numbers.

* Spencer, David A. 1976. "Wintering of the Bald Eagle in the Lower 48 States" National Agricultural Chemical Assoc. Washington, DC 20005

Records during the current winter of 1976-77, when water flows to the Truckee-Carson Irrigation District were near the Operating Criteria and Procedures (OCAP) level (288,100 acre feet), indicate Bald Eagle numbers similar to those of better water years. It appears, however, that some birds may have moved to the Humboldt Sink area 45 miles to the north. This area has not suffered as severely from the drought which has greatly reduced Lahontan Valley water acreage. Other factors such as the cutting of trees used for perching, severity of winter weather, and human disturbance also have an effect on Bald Eagle use and complicate the evaluation of the effect on the Bald Eagle habitat of reduced water flows under the OCAP.

Generally it can be said that reduced water flows which will occur under the OCAP for the Lower Carson-Truckee Rivers could over several years of low return flows to critical waterfowl marsh areas adversely affect water-fowl levels to the point of reducing Bald Eagle use in the Lower Carson River Basin. Records of peak Bald Eagle numbers have been kept at Stillwater Wildlife Management Area and Refuge since 1954. When winter duck use days are plotted against peak Bald Eagle sightings an apparent correlation can be seen (see Graph 1). This data indicates that at very low flow levels, such as occurred in 1961-1962, Bald Eagle use was reduced. However, the other factors previously mentioned can also affect Bald Eagle numbers and mask or exaggerate these changes.

The exact impact of the OCAP on the Bald Eagle use is impossible to predict, but past records indicate that Bald Eagle numbers fluctuate with waterfowl numbers and the predicted drop in waterfowl habitat will to some degree adversely affect Bald Eagle use of the Lower Carson River Basin.

In summary, reduced water deliveries to the Newlands Irrigation Project could adversely impact wintering Bald Eagles in the following manner:

1. Less wetland habitat available for eagle foraging activities.
2. There will be less marsh acreage available for waterfowl hunting, resulting in fewer crippled and dead birds that supplement the Bald Eagle diet.
3. Total waterfowl use, which appears to be correlated with peak Bald Eagle numbers, as shown on attachment 2, will decline.
4. A reduction in marsh habitat may result in concentrating water-oriented recreation which would increase the human disturbance factor in regard to eagle activities.
5. Fish are a staple Bald Eagle food item. The Lahontan Valley fish population would be greatly reduced under the OCAP due to a loss in total water acreage. Also, remaining wetlands may be shallow to the point that winter freeze up will kill large numbers of fish.

Table 1

BALD EAGLE USE

UNIT	<u>JAN-APR 72</u>		<u>SEPT 72-APR 73</u>		<u>SEPT 73-APR 74</u>		<u>SEPT 74-APR 75</u>		<u>SEPT 75-APR 76**</u>		TOTAL U/D	% of TOTAL U/D
	<u>No.</u>	<u>U/D</u>	<u>No.</u>	<u>U/D</u>	<u>No.</u>	<u>U/D</u>	<u>No.</u>	<u>U/D</u>	<u>No.</u>	<u>U/D</u>		
2. Massie-Mahala	1-2	35							1	20	55	2%
3. Soda Lakes			1-3	28	1-3	35	1-2	21			84	3
5. Sheckler Reservoir	1	40	1	7	1	7	1	7	2	14	75	3
6. Fallon Farmland	1-2	56									56	2
7. Carson Lake	1-2	196*	1-2	160	1	14	1-2	21	1-2	80	471	18
8. Harmon Reservoir	1	28	1	56					2	40	124	5
9. S-Line Reservoir	1-2	70			1	7	2	28	2	80	185	7
10. Canvasback Club	1-2	49	1	35							84	3
11. Stillwater WMA	<u>3-5</u>	<u>280</u>	<u>2-4</u>	<u>252</u>	<u>2-3</u>	<u>252</u>	<u>2-4</u>	<u>375</u>	<u>2-6</u>	<u>300</u>	<u>1,459</u>	56
Total	10-17	754	7-12	538	6-9	315	7-11	452	10-15	534	2,593	

* Includes one sighting 4/2-6/25/72

** No record for Sept-Dec 75 except for Stillwater WM Area

PEAK EAGLE POPULATION
SEPT - APRIL

WATERFOWL USE-DAYS V. EAGLE POPULATION
STILLWATER W.M. AREA '54 - '76

WATERFOWL USE-DAYS
SEPT-APRIL (MILLIONS)

